

國立東華大學應用數學系 專題演講

主講人：李金上教授

Department of Public Health Sciences University of California, Davis

講題：Semiparametric Generalized Linear Models and Their Applications

時間：100年11月18日(星期五) 15:10-16:50

地點：理學院A324會議室

摘要

Cubic B -splines are used to approximate the nonparametric component of a semi-parametric generalized linear model. The semiparametric generalized linear model is fit by the penalized likelihood method in order to prevent over-fitting. The resulting maximum penalized likelihood estimator is used to develop a penalized likelihood ratio test statistic for the linearity of the nonparametric component. When the number of knots is fixed, the null distribution of the penalized likelihood ratio test statistic is asymptotically the distribution of a linear combination of independent chi-squared random variables, each with one degree of freedom. In practice, the smoothing parameter value is determined by specifying a value equal to the expected value of the test statistic under the null hypothesis. The power performance of the proposal test is studied with simulations. Real examples are used to illustrate its practicality.



歡

迎

參

加



se1001118